

## CLAIMS

What is claimed is:

1. A method of detecting an abnormal video signal in a display device, comprising:
  - selecting an R,G,B signal and setting a region of the selected R,G,B signal to be checked;
  - detecting a minimum pixel level value in the checked region of the selected R,G,B signal;
  - comparing the minimum pixel level value for the selected R,G,B signal with a predetermined threshold value and checking if an abnormal R,G,B signal is present; and
  - displaying on a screen a message indicating whether the selected R,G,B is abnormal.
2. The method of claim 1, wherein the comparing comprises:
  - setting a flag which indicates whether the selected R,G,B signal is abnormal when the minimum pixel level value is smaller than a predetermined threshold value, and
  - resetting the flag when the minimum pixel level value is larger than the predetermined threshold value.
3. The method of claim 1, wherein the displaying comprises:
  - checking whether a flag indicating whether the selected R,G,B signal is abnormal is set;
  - checking if a video signal checking function is enabled when the flag is set; and
  - setting how long the message will be displayed and how long a predetermined warning message is displayed, when enabling of the video signal checking function is confirmed.
4. A display device comprising:
  - a signal inputting unit receiving R,G,B signals, a horizontal synchronization signal, and a vertical synchronization signal;
  - a minimum value detector detecting a minimum pixel level value in a particular region of a selected R,G,B signal input from the signal inputting unit;
  - a controller comparing the minimum pixel level value with a predetermined value and checks if the selected R,G,B signal is abnormal ; and
  - a warning message indicating an abnormal state of the selected R,G,B signal as determined by the controller.

5. The display device of claim 4, wherein the minimum value detector comprises:  
a signal selector selecting one of the received R,G,B signals;  
a storage unit stores the minimum pixel level value detected in the particular region of  
the selected R,G,B signal; and

a comparator comparing the minimum pixel level value in the particular region of the  
selected R,G,B signal with a stored minimum pixel level value detected in a particular region of  
a previous R,G,B signal, and thereby detects the minimum pixel level value .

6. The display device of claim 4, wherein the controller generates an on-screen-  
display (OSD) signal that enables and disables an R,G,B, signal checking function .

7. A method of detecting an abnormal video signal in a display device, comprising:  
receiving R,G,B signals from a host;  
detecting a minimum pixel level value in an R,G,B, signal selected from the received  
R,G,B signals;  
determining if the selected R,G,B signal is abnormal based on a comparison between  
the minimum pixel level value in the selected R,G,B signal and a predetermined value; and  
displaying on a screen a message indicating whether the selected R,G,B signal is  
abnormal.

8. The method of claim 7, wherein the determining comprises:  
comparing the minimum pixel level value within the selected R,G,B signal with the  
predetermined value;  
extracting a minimum pixel level value when the pixel level value in the selected R,G,B  
signal is smaller than the predetermined value.

10. The method of claim 7, wherein the determining comprises:  
setting a flag indicating whether the selected R,G,B signal is abnormal when the  
minimum pixel level value is smaller than the predetermined value, and  
resetting the flag when the minimum pixel level value is larger than the predetermined  
value.

11. The method of claim 7, wherein the displaying comprises:  
checking whether a flag indicating whether the selected R,G,B signal is abnormal is set;  
checking if a video signal checking function is enabled when the flag is set; and  
setting how long the message will be displayed and how long a predetermined warning message is displayed on the screen when the video signal checking function is enabled.

12. A display device comprising:  
a signal inputting unit receiving R,G,B video signals;  
an abnormal state detector detecting an abnormal state of in an R,G,B signal selected from among the received R,G,B signals based on a comparison of a detected pixel level value in the R,G,B signal and a predetermined value; and  
a warning message indicating whether an abnormal state is detected.

13. The display device of claim 12, wherein the abnormal state detector comprises:  
a minimum value detector detecting a minimum pixel level value in the selected R,G,B signal; and  
a controller which compares the minimum pixel level value with a predetermined value and checks if the selected R,G,B signal is abnormal.

14. The display device of claim 13, wherein the minimum value detector comprises:  
a signal selector selecting one of the received R, G, B signals;  
a storage unit storing the minimum pixel level value detected in the selected R,G,B signal;  
a comparator comparing the minimum pixel level value in the selected R,G,B signal with a minimum pixel level value detected in a previous signal, and extracts a minimum pixel level value.

15. The display device of claim 13, wherein the controller generates a set flag when an abnormal signal is detected.

16. The display device of claim 12, wherein the controller generates an on-screen-display (OSD) signal that enables or disables a signal checking function.